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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,201	04/16/2004	Noriyasu Amano	461-173	7674
23117 7590 10/07/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER FLANIGAN, ALLEN J				
ART UNIT		PAPER NUMBER		
3744				
MAIL DATE		DELIVERY MODE		
10/07/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/825,201

Applicant(s)

AMANO ET AL.

Examiner

Allen J. Flanigan

Art Unit

3744

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-6, 8 and 10-16 is/are pending in the application.
- 4a) Of the above claim(s) 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6, 8, 10, and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI-108)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

Newly submitted claims 12-16 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Inventions defined in the originally filed claims and the newly filed method claims are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the claimed device can be used for another and materially different process, such as providing thermally stabilized storage of virtually any flowable material (liquid, gas, particulate matter, etc.) other than fuel liable to evaporate.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 12-16 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 4, 5, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanda et al.

Please see the comments made in regard to the above rejection in the previous Office action. Regarding new claim 11, note net 21 and spacers 8 of Kanda et al.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanda et al.

In discussing the prior art, Kanda et al. indicate that spherical capsules containing water for latent heat storage is known in the art (see lines 24-30 of column 1 of Kanda et al.). Generally, a change of shape that does not produce a significant and unexpected advantage or new function is considered obvious¹. Adopting a different shape for the elongated containers 26 of the illustrative embodiment of Kanda et al., particularly one known to have been used in the art, would have been obvious to one of ordinary skill in the art.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanda et al. in view of Foley.

Please see the comments made in regard to the above rejection in the previous Office action.

¹ In re Dailey and Eilers, 149 U.S.P.Q. 47.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanda et al. in view of Takeda et al.

Please see the comments made in regard to the above rejection in the previous Office action.

Applicant's arguments filed 7/7/2008 have been fully considered but they are not persuasive.

The language added to claim 4 fails to distinguish over Kanda et al. First, since the fuel is not a positively recited element of the claim, "arranged on a liquid fuel surface of the stored fuel" would not appear to be entitled to patentable weight, as it concerns the intended use of the claimed device. Further, even if the claim did positively recite the fuel as an element, or was construed to stipulate that the recited "plurality of containers" would be "arranged on the surface" of fuel or other liquid when such liquid was introduced into the tank, the claim would still fail to define over Kanda et al. Nothing in the recitation "arranged on a . . . surface" requires the entire container to be at the surface, or prohibits a portion of the containers from extending below the surface. Indeed, a portion of applicants' spherical containers will inherently be disposed below the surface of the liquid, regardless of how buoyant they might be.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.**

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (571) 272-4910. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Allen J. Flanigan/
Primary Examiner, Art Unit 3744